11. Ralph

Program Name: Ralph.java Input File: ralph.dat

Data storage limits have always been fascinating to Ralph and he wanted to know if there was a way to test whether or not a number could be "morphed" into the largest possible value to fit into a particular data type. He knew that the maximum value a 16-bit signed value was 2^15-1, or 32767, and wanted to test his theory. He needs help to write a program to do this, given any five-digit value greater than 9999 and less than 100,000.

For example, is there a way to maximize the value 12345 by rearranging the digits to find the largest possible value that would fit in a 16-bit signed integer memory without exceeding the maximum value? He worked out possible combinations and decided that 32541 was the best combination that represented the largest possible value without exceeding the limit.

Input: Several five-digit integers N, each within the range 9999<N<100,000.

Output: The largest possible value made up of the digits in the given integer, or the message "EXCEEDS MAX VALUE" (significant digits only in final output).

Sample input:

```
12345
32677
33445
60405
```

Sample output:

```
32541
32767
EXCEEDS MAX VALUE
6540
```